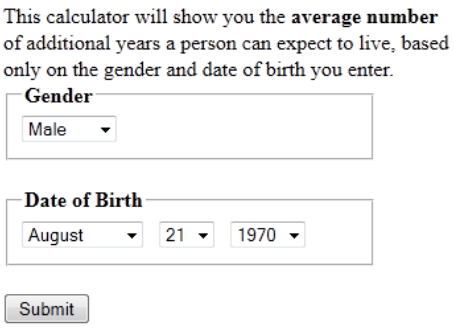
Homework 6

CMSY-217, Fall 2011

The source code for this assignment must be submitted electronically using the Canvas course website prior to the start of class on Thursday, December 8.

The Social Security Administration provides a webapp (http://www.ssa.gov/oact/population/longevity.html) which allows you to display the average number of additional years a person can expect to live. The estimate is based on the gender and date of birth that you enter into the XHTML form. The inputs shown on the form below produce the results shown on the following page.



1. Write a servlet called `Longevity` which provides the same functionality as the webapp on the Social Security website. The XHTML form and a partial implementation of the `Longevity` servlet have been provided for you.

2. Add code to the `doPost` method to get the parameters from the XHTML form and initialize the variables `sex`, `birthMonth`, `birthDay`, and `birthYear`. Create a `Date` object called `birthDate` using the parameters obtained from the form.

3. Complete the `LifeExpectancyBean` class by adding four member variables of type `double` named `current`, `early`, `normal`, and `delayed` to represent the four life expectancies that will be shown on the results page. Be sure you have satisfied all of the requirements so that the `LifeExpectancyBean` is a proper JavaBean.

4. Finish the `doPost` method by creating a `LifeExpectancyBean` called lebean using the two-argument constructor and passing the `birthDate` and `sex` variables created in step 2.

5. Write the `printTableData` method to get the four life expectancies from `lebean` and add them to the XHTML table whose start tag is in the `printHeader` method and end tag is in the `printFooter` method. Note that the `printHeader` and `printFooter`

methods are already complete and should not be modified. The format of the output should exactly match the following. Be aware that the values shown in the third column are simply the sum of values shown in the first and second columns.

Life Expectancy Calculator

The following table lists the **average number** of additional years a male born on August 21, 1970 can expect to live when he reaches a specific age.

At Age	**Additional Life Expectancy** (in years)	**Estimated Total Years**
41 and 3 months[a]	40.0	81.2
62	22.7	84.7
67[b]	18.8	85.8
70	16.5	86.5

[a] Your current age.
[b] Your normal (or full) retirement age.

Note: The estimates of additional life expectancy:

- do not take into account a wide number of factors such as current health, lifestyle, and family history that could increase or decrease life expectancy.
- are based on
  - the gender and date of birth you entered (your cohort) and
  - information from our cohort life expectancy tables. (Some of the information can be found in the 2011 Trustees Report.)

Estimate as of Thu Nov 24 07:59:48 EST 2011.